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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,436	11/25/2003	David Bruce Kumhyr	AUS920030911US1	7133

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IBM CORP (YA)
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EXAMINER

MARC, MCDIEUNEL

ART UNIT	PAPER NUMBER
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3661

MAIL DATE	DELIVERY MODE
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07/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/721,436	Applicant(s) KUMHYR, DAVID BRUCE	
	Examiner McDieunel Marc	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 19-28 and 32-35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-35 are pending for examination.
2. The rejection to claims 1-18 and 29-31 under 35 U.S.C. 102(a) as being anticipated by **Sempé et al. (Autonomous Robots Sharing a Charging Station with no Communication: a Case Study, 2002)** is maintained.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-18 and 29-31 are rejected under 35 U.S.C. 102(a) as being anticipated by **Sempé et al. (Autonomous Robots Sharing a Charging Station with no Communication: a Case Study, 2002)**.

As per claims 1-18 and 29-31, **Sempé et al.** teaches a research that “focuses on the design of a group of self-sufficient mobile robots, such that a group of three robots can remain in operation and efficiently share a charging station, using simple mechanisms. An experimental bottom-up approach has been adopted in order to test various strategies to manage collective

self-sufficiency, which rely upon low-level mechanisms such as non-direct communication and non-complex decision making” equates to a recharging system, comprising: a nesting station having a first connector for a self-mobile device, said first connector being configured in such a manner that self-mobile devices can self-position into a position for charging; a plurality of self-mobile devices, each of said plurality of self-mobile devices having a capability to self-propel into a charging position with said first connector; a first communications device associated with said nesting station and a plurality of second communication devices associated with respective ones of said plurality of self-mobile devices, whereby said nesting station can have two-way communications with said plurality of self-mobile devices; a first protocol for negotiating and utilizing respective charging times for said plurality of self-mobile devices, said protocol being negotiated by said nesting station and each of said plurality of self-mobile devices, whereby human intervention is not necessary for charging of said plurality of self-mobile devices (see entire document).

Response to Arguments

As to the reference not teaching “any communication or no ability to communicate or establishing a communication link between said nesting station and one of the plurality of self-mobile devices” (see the abstract), note that a group of self-sufficient mobile robots share a charging station. There is not communication between robots, however each robot of the group contains the ability to communicate electronically with the charging station for recharging after making inter decision making (see Introduction, particularly the robot is capable of “locate and use a charging station”), which is nothing but communication;

As to the reference not having "no need for any type of negotiation" (see Introduction, wherein the ability of determine/ensure its power supply by itself and examine its power supply constantly), equals negotiation/decision making;

As to the reference not teaching "a second protocol for automatically providing new instruction" (see introduction, wherein the power supply system can maintain itself or else use a recharging station), being taken as second protocol;

As to the reference not teaching "any type of connector" (see section 2.1, wherein the robot can "reach and connect to the station and to recharge the battery");

5. Applicant's arguments filed 5/21/2007 have been fully considered but they are not persuasive.

Allowable Subject Matter

6. Claims 19-28 and 32-35 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fail to teach or fairly suggest scheduling a time slot for charging the robot's battery in combination with the other elements and features of the claimed invention.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (571) 272-6964. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


McDouneel Marc
Examiner
Art Unit 3661

Monday, June 25, 2007
MM/


THOMAS BLACK
SUPERVISORY PATENT EXAMINER